General

Guideline Title

Delirium and acute problematic behavior in the long-term care setting.

Bibliographic Source(s)

American Medical Directors Association (AMDA). Delirium and acute problematic behavior in the long-term care setting. Columbia (MD): American Medical Directors Association (AMDA); 2008. 36 p. [36 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Medical Directors Association (AMDA). Altered mental states. Columbia (MD): American Medical Directors Association (AMDA); 1998. 20 p.

The American Medical Directors Association (AMDA) reaffirmed the currency of this guideline in 2013.

Regulatory Alert

FDA Warning/Regulatory Alert

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- May 10, 2016 – Olanzapine : The U.S. Food and Drug Administration (FDA) is warning that the antipsychotic medicine olanzapine can cause a rare but serious skin reaction that can progress to affect other parts of the body. FDA is adding a new warning to the drug labels for all olanzapine-containing products that describes this severe condition known as Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS).

Recommendations

Major Recommendations

The algorithm Delirium and Acute Problematic Behavior in the Long-Term Care Setting is to be used in conjunction with the clinical practice guideline. The numbers next to the different components of the algorithm correspond with the steps in the text. Refer to the "Guideline Availability" field for information on obtaining the full text guideline.

Clinical Algorithm(s)

A clinical algorithm is provided for Delirium and Acute Problematic Behavior in the Long-Term Care Setting.

Scope

Disease/Condition(s)

Altered mental states

- Delirium
- Acute problematic behavior
- Behavioral and psychological symptoms related to dementia (BPSD)

Guideline Category

Diagnosis

Evaluation

Management

Risk Assessment

Treatment

Clinical Specialty

Geriatrics

Internal Medicine

Nursing

Pharmacology

Psychiatry

Psychology

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Nurses

Pharmacists

Physician Assistants

Physicians

Social Workers

Guideline Objective(s)

To improve the quality of care delivered to patients in long-term care facilities
To offer care providers and practitioners in long-term care facilities a systematic approach to recognizing, assessing, treating, and monitoring patients with delirium and acute problematic behavior

Target Population

Elderly residents of long-term care facilities with delirium or acute problematic behavior

Interventions and Practices Considered

Recognition/Assessment

Identification of the patient's problematic behavior and altered mental function including delirium (assessment of symptoms, medical history, medications; use of Confusion Assessment Method [CAM] instrument and diagnostic criteria for delirium)
Assessment of individual risk factors for problematic behavior and delirium
Determination of the urgency of the situation and the need for additional evaluation and testing
Identification of the cause(s) of problematic behavior and altered mental function
Assessment of medical illnesses and conditions that can affect behavior such as medication-related adverse consequences, fluid or electrolyte imbalance, infections, acute renal or hepatic failure, head trauma, myocardial infarction, stroke, and others
Use of laboratory tests including electrolytes, blood urea nitrogen (BUN), glucose, creatinine, complete blood count (CBC), chest x-ray, urinalysis, electrocardiogram (EKG), serum vitamin B_{12} level, and others
Consideration of possible psychiatric illnesses such as psychosis, mood disorders, and personality disorders and dementia-related causes

Management/Treatment

Initiation of a care plan for treatment
Provision of symptomatic and cause-specific management
Administration of medications such as antipsychotics, antidepressants, cholinesterase inhibitors and memantine, anticonvulsants, and anxiolytics

Monitoring

Monitoring and adjustment of interventions as indicated
Reviewing the effectiveness and appropriateness of medications
Prevention, identification, and addressing of any complications of the conditions and treatments

Major Outcomes Considered

Benefits and risks of treatment

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

2008 Original Guideline

Not stated

2013 Reaffirmation

MEDLINE and PubMed were searched for updated literature related to the subject published between June 2011 and January 2013. This search is performed annually and completed by the clinical practice committee vice-chair. If new literature does not change the content or scope of the original guideline, it is deemed to be current.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The guideline was developed by an interdisciplinary workgroup using a process that combined evidence- and consensus-based approaches. The workgroup included practitioners and others involved in patient care in long-term care facilities. Beginning with a general guideline developed by an agency, association, or organization such as the Agency for Healthcare Research and Quality (AHRQ), pertinent articles and information, and a draft outline, the group worked to make a concise, usable guideline that is tailored to the long-term care setting. Because scientific research in the long-term care population is limited, many recommendations were based on the expert opinion of practitioners in the field.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Guideline revisions were completed under the direction of the Clinical Practice Guideline Steering Committee. The committee incorporated information published in peer-reviewed journals after the original guidelines appeared, as well as comments and recommendations not only from experts in the field addressed by the guideline but also from "hands-on" long-term care practitioners and staff.

All American Medical Directors Association (AMDA) clinical practice guidelines undergo external review. The draft guideline is sent to approximately 175+ reviewers. These reviewers include AMDA physician members and independent physicians, specialists, nurse practitioners, pharmacists, nurses, consultants in the specified area, and organizations that are knowledgeable of the guideline topic and the long-term care setting.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

The guideline was developed by an interdisciplinary work group using a process that combined evidence- and consensus-based thinking.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Following the steps in this guideline should permit facilities and their staff and practitioners to:

- Optimize their approach to problematic behavior and delirium.
- Prevent unnecessary hospitalizations.
- Avoid over-reliance on psychiatric consultation for problematic behavior or altered mental function that might harm the patient if it substitutes for or delays recognition and management of medical causes.

Potential Harms

Hospitalization of patients with problematic behavior and delirium may be traumatic for the patient. Hospital staff may not be familiar with the patient's history and symptoms, understand what triggers the problematic behavior, or be aware of the environment in which the patient functions. Frequently, hospitalization omits vital supportive care or relevant nonpharmacologic approaches and may result in undesirable changes in the patient's medication regimen. Many patients have a recurrence of problematic behavior after hospitalization, and repeat hospital transfers may not be any more helpful.

Adverse Effects of Medications

- Unwarranted or unnecessarily prolonged *antibiotic* treatment is a widespread concern. Antibiotics can lead to additional complications (e.g., anorexia- or diarrhea-related fluid loss) that can contribute to impaired mental function or to the development of resistant organisms.
- All *antipsychotics* should be used cautiously, and their risks identified and documented, in patients with cerebrovascular risk factors.
- Patients who have dementia with Lewy bodies generally have an increased sensitivity to antipsychotics. Second-generation antipsychotics may have a lower frequency of extrapyramidal side effects such as parkinsonism or tardive dyskinesia, but all antipsychotics have some significant associated risks. Also, antipsychotics may exacerbate symptoms in patients with Lewy body dementia. All antipsychotic medications have the potential to induce akathisia, a sense of motor restlessness that can result in pacing, physical agitation, and complaints of leg and thigh discomfort.

In April 2005, the FDA issued an overall health advisory concerning an increased risk of death in patients with dementia who are treated with second-generation (so-called "atypical") antipsychotics. This warning has since been expanded to include all antipsychotic medications. For example, warnings about the use of *haloperidol* have been revised to include cases of sudden death due to impairment of cardiac conduction in patients treated with this agent, especially when the medication is given intravenously (a common but hazardous off-label use) or at doses higher than recommended.

When inappropriately prescribed for patients with problematic behavior due to other causes, *antidepressants* may exacerbate symptoms. Excessive serotonin stimulation due to selective serotonin reuptake inhibitors (SSRIs, alone or in combination with other medications that affect serotonin levels) can lead to agitation, delirium, seizures, other psychiatric symptoms, or death ("serotonin syndrome"). The concurrent use of several antidepressants for diverse symptoms (e.g., depression, anxiety, pain, appetite stimulation, and insomnia) may also increase the risk for adverse consequences such as falls and serotonin syndrome. Unless another medication in the same class is being substituted, withdrawing antidepressants too rapidly may cause behavioral symptoms that can be mistaken for a return of the underlying condition.

Adverse consequences of *cholinesterase inhibitors* can include hallucinations, confusion, and agitation, and those for *memantine* may include fatigue, headache, and hypertension. Cholinesterase inhibitors can also cause anorexia and other gastrointestinal symptoms that eventually lead to weight loss.

Medications with *anticholinergic effects* can cause problematic behavior and may counteract the effectiveness of cholinesterase inhibitors. Therefore, it is important to review the medication regimen and reduce or eliminate medications with anticholinergic properties or side effects, whether or not cholinesterase inhibitors are being given.

Divalproex sodium and other earlier-generation *anticonvulsants* are associated with significant side effects, such as sedation. *Lamotrigine* may have fewer significant side effects than the earlier-generation anticonvulsants.

Inappropriate use of *benzodiazepines* to try to manage patients with delirium and psychosis may permit symptoms to progress and may lead to the use of additional inappropriate and ineffective medications or to avoidable hospitalization. All benzodiazepines are associated to some degree with adverse consequences such as increased confusion, sedation, falls, and hip fractures in a susceptible population. In addition, they may cause increased agitation, insomnia, and other side effects. Tolerance occurs rapidly with short half-life benzodiazepines. Short-half-life benzodiazepines such as lorazepam, which are often used to treat patients with psychosis, delirium, and nonspecific agitated or combative behavior, are best avoided. They are often ineffective and commonly cause oversedation and "rebound" effects (anxiety and insomnia) after each dose.

Qualifying Statements

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The utilization of the AMDA's Clinical Practice Guideline does not preclude compliance with State and Federal regulation as well as facility policies and procedures. They are not substitutes for the experience and judgment of clinicians and caregivers. The Clinical Practice Guidelines are not to be considered as standards of care but are developed to enhance the clinicians' ability to practice.

AMDA guidelines emphasize key care processes and are organized for ready incorporation into facility-specific policies and procedures to guide staff and practitioner practices and performance. They are meant to be used in a manner appropriate to the population and practice of a particular facility.

Implementation of the Guideline

Description of Implementation Strategy

The implementation of this clinical practice guideline (CPG) is outlined in four phases. Each phase presents a series of steps, which should be carried out in the process of implementing the practices presented in this guideline. Each phase is summarized below.

Recognition

Define the area of improvement and determine if there is a CPG available for the defined area. Then evaluate the pertinence and feasibility of implementing the CPG

Assessment

Define the functions necessary for implementation and then educate and train staff. Assess and document performance and outcome indicators and then develop a system to measure outcomes

Implementation

Identify and document how each step of the CPG will be carried out and develop an implementation timetable
Identify individual responsible for each step of the CPG
Identify support systems that impact the direct care
Educate and train appropriate individuals in specific CPG implementation and then implement the CPG

Monitoring

Evaluate performance based on relevant indicators and identify areas for improvement
Evaluate the predefined performance measures and obtain and provide feedback

Guideline implementation will be affected by resources available in the facility, including staffing, and will require the involvement of all those in the facility who have a role in patient care.

Implementation Tools

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

1998 (revised 2008; reaffirmed 2013)

Guideline Developer(s)

American Medical Directors Association - Professional Association

Guideline Developer Comment

Organizational participants included:

- American Association of Homes and Services for the Aging
- American College of Health Care Administrators
- American Geriatrics Society
- American Health Care Association
- American Society of Consultant Pharmacists
- National Association of Directors of Nursing Administration in Long-Term Care
- National Association of Geriatric Nursing Assistants
- National Conference of Gerontological Nurse Practitioners

Source(s) of Funding

Not stated

Guideline Committee

Steering Committee

Composition of Group That Authored the Guideline

Committee Members: Lisa Cantrell, RN, C; Charles Cefalu, MD, MS; Sherrie Dornberger, RNC, CDONA, FDONA; Sandra Fitzler, RN; Joseph Gruber, RPh, FASCP, CGP; Susan M. Levy, MD, CMD; Evvie F. Munley; Jonathan Musher, MD, CMD; Barbara Resnick, PhD, CRNP; William Simonson, Pharm.D., FASCP, CGP; Marianna Grachek, MSN, CNHA, CALA

Financial Disclosures/Conflicts of Interest

Not stated

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Guideline Availability

Electronic copies: None available

Print copies: Available from the American Medical Directors Association, 10480 Little Patuxent Pkwy, Suite 760, Columbia, MD 21044. Telephone: (800) 876-2632 or (410) 740-9743; Fax (410) 740-4572. Web site: www.amda.com.

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

This summary was completed by ECRI on July 12, 1999. The information was verified by the American Medical Directors Association as of August 8, 1999. This summary was updated by ECRI Institute on May 20, 2008. This summary was updated by ECRI Institute on May 1, 2009 following the U.S. Food and Drug Administration advisory on antiepileptic drugs. This summary was updated by ECRI Institute on September 15, 2010 following the U.S. Food and Drug Administration advisory on Lamictal (lamotrigine). The currency of the guideline was reaffirmed by the developer in 2013 and this summary was updated by ECRI Institute on December 2, 2013. This summary was updated by ECRI Institute on May 24, 2016 following the U.S. Food and Drug Administration advisory on Olanzapine.

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